

**METHOD AND APPARATUS FOR THE USE OF SELF-ASSEMBLED
NANOWIRES FOR THE REMOVAL OF HEAT FROM INTEGRATED CIRCUITS**

ABSTRACT OF THE DISCLOSURE

5 This invention relates to the conduction of heat within the structure of an integrated circuit. The invention discloses a heat conduction device and a method of fabricating same, that utilizes thermally conductive vias to extract heat from local power generating regions of the substrate to top or bottom surfaces of the integrated circuit die. Conductive vias contain self-assembled carbon nanotubes for the enhancement of heat conduction out of the
10 integrated circuit.